



BDD and Test Automation using Cucumber, Gherkin, Selenium & More (TT3654)

Explore BDD using Cucumber, Gherkin, BDD, 3 Amigos, Maven & More

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Course Snapshot

- **Course:** Test Automation with Behavior Driven Development (BDD) using Cucumber, Gherkin, Selenium & More (TT3654)
- **Duration:** 4 days
- **Skill Level & Audience:** The course is aimed at individuals and teams delivering and involved with software development and software quality assurance. Basic Java experience is required for some of the hands-on labs.
- **Hands-on Learning:** This course is approximately **50% hands-on**, combining expert lecture, real-world demonstrations and group discussions with machine-based practical labs and exercises. Student machines are required.
- **Delivery Options:** This course is available for **onsite private classroom presentation, live online virtual presentation**, or can be presented in a **flexible blended learning format** for combined onsite and remote attendees. Please also ask about our **Self-Paced / Video** or **QuickSkills / Short Course** options.
- **Public Schedule:** This course has active dates on our live-online open enrollment **Public Schedule**.
- **Customizable:** This course agenda, topics and labs can be further adjusted to target your specific training skills objectives, tools and learning goals. Please inquire for details.

Overview

BDD is a process that defines features and executable specifications that are expressed using Cucumber and Gherkin. To best explore the practical application of BDD, implementations of the features and behaviors must be developed and tested. For this course, we are using Java implementations and testing to transform the features into implemented functionality. As such, it is helpful if incoming students know Java. There is no training on Java in this course. If students do not have a background in Java, they may simply follow along with the labs, run the solutions to verify implementation, and walk through the practical use of BDD.

Throughout this course, students will learn the fundamental skills required to make BDD and Specification by Example a success. Students will receive comprehensive training in test automation and will learn how to write executable specifications with Cucumber.

Learning Objectives

This skills-centric course is about **50% hands-on lab and 50% lecture** ratio. Working in a hands-on learning environment, guided by our expert team, attendees will explore:

- Cucumber
- Behavior Driven Development (BDD)
- Gherkin
- 3 amigos
- Cucumber JVM
- Selenium WebDriver Integration
- Maven
- Page Object Model with Page factory & Real time project frameworks

Need different skills or topics? If your team requires different topics or tools, additional skills or custom approach, this course may be further adjusted to accommodate. We offer additional testing, Cucumber, Gherkin Selenium, TDD, BDD, programming, testing tools, test automation, QA, services, security and other related topics that may be blended with this course for a track that best suits your needs. Our team will collaborate with you to understand your needs and will target the course to focus on your specific learning objectives and goals.

Audience & Pre-Requisites

The course is aimed at individuals and teams delivering and involved with software development and software quality assurance. Attendees might include Developers, Test Analysts, Senior Test Analysts, SCRUM development team members, Business Product Owners, Technical Test Managers and others. To be successful in this course, attending students should ideally have a working knowledge of Object-Oriented programming languages (such as C# or Java). Familiarity with basic Selenium skills will also be helpful.

Take Before: We recommend attendees have the skills in the course listed below, or attend this course as a pre-requisite:

- TT2190 Basic Java Primer for Selenium Users (2 days)

Related Selenium Courses: Our TDD and programming tracks include a wide variety of follow-on courses and learning paths for next-level testing skills. Please see our **Testing, TDD / BDD, Test Automation & Web Testing Tools (Selenium, Gherkin, Cucumber)**

Suite of courses, or inquire for recommendations based on your specific role and goals.

- TT2190 Basic Java Syntax Primer for Selenium Users / Non-Developers (QA, Testers,) (2 days)
- TT3610 Introduction to Selenium | Selenium Web Testing (3 days)
- TT3611 Manual Web Testing with Selenium (1 day)
- TT3612 Automated Web Testing with Selenium WebDriver (3 days)
- TT3618 Test Automation Fundamentals: Selenium, Cucumber, Gherkin and Maven (5 days)
- TT3619 Remote Test Automation with Selenium Grid
- TT3620 Parallel Web Testing with Selenium Grid & Docker
- TT3650 Cucumber Essentials – Introduction to Cucumber (2 days)
- TT3654 Test Automation with BDD using Cucumber, Gherkin, Selenium & More (4 days)
- TT3540 Agile Continuous Integration, Testing, and Deployment (CI, Refactoring, GIT, BitBucket & More) (3 days)

Enhanced Learning Services: Please also ask about our **Pre-Training Class OnRamp & Prep / Primer** offerings, **Skills Gap Assessment Services, Case Studies, Knowledge Check Quizzes, Skills Immersion Programs & Camps, Collaborative Mentoring Services** and **Extended Learning Support & Post Training** services.

Course Topics / Agenda

Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We will work with you to tune this course and level of coverage to target the skills you need most.

1. Cucumber JVM

- What is BDD & What it means in Agile
- 3 Amigos and Collaboration
- How Cucumber implements BDD
- Downloading Cucumber Jars
- Setup Cucumber project
- What is Gherkin language and how it is used in BDD
- Preparing Features File having test scenarios
- Writing step definitions to support test scenarios
- Writing Runner Class
- Annotations - Given, When, Then, And, But, Before and After
- Passing parameters in Step definition Functions
- Using regular expression in step implementation to parameterize
- Parameterizing complete scenario using features class
- Datatable in Cucumber overview and its implementation
- Pretty, Tags and Glue
- Background, Scenario Outline & Examples in Cucumber
- Generating Cucumber Reports

- Cucumber HTML and JSON Reports
- Using Assertions to report failure

2. Maven Layer

- Setup Maven
- Download the Maven Dependencies for Cucumber, Selenium and Junit
- Running the Maven project from Command Console

3. Selenium Layer

- Create Selenium Project
- Introducing selenium layer
- Building custom functions
- Use Firefox Driver/ Multiple Drivers
- Use Xpath and ID to find elements
- Execute the Test

4. Page Objects and Page Factory Layer

- What is Page Object and its usage
- What is Page Factory in Selenium
- Create Page Objects and Page Factory Usage

- Elements Abstraction Layer
- Create Junit Tests using Page Objects
- Execute the Test

5. Build Automation Framework (Wiring all the components to build a Cucumber based Test Automation project of a Live Website)

- Pairing Exercise to derive and automate BDD scenario
- Create the Maven Project
- Create Cucumber Structure
- Create business focused Cucumber feature files
- Create Step definitions
- Executing project from Maven
- Background and Pending Exception
- Create Abstraction
- Introduce Page Objects
- Introduce class to support multiple browsers.
- Parallel Test Execution
- Parameterizing/repeating test cases from feature classes
- Implementing/deciding Tags

- Running all/limited tests
- Generating Cucumber reports

Student Materials: Each student will receive a **Student Guide** with course notes, code samples, software tutorials, diagrams and related reference materials and links (as applicable). Our courses also include step by step hands-on lab instructions and solutions, clearly illustrated for users to complete hands-on work in class, and to revisit to review or refresh skills at any time. Students will also receive the project files (or code, if applicable) and solutions required for the hands-on work.

Classroom Setup Made Simple: Our dedicated tech team will work with you to **ensure your classroom and lab environment is setup, tested and ready to go** well in advance of the course delivery date, ensuring a smooth start to class and seamless hands-on experience for your students. We offer several flexible student machine setup options including **guided manual set up** for simple installation directly on student machines, or **cloud based / remote hosted lab solutions** where students can log in to a complete separate lab environment minus any installations, or we can supply **complete turn-key, pre-loaded equipment** to bring ready-to-go student machines to your facility. Please inquire for details, options and pricing.

For More Information

Need dedicated training? All courses can be presented **onsite** or **online**, or in a **combined / flex / blended learning format**, tailored to target your specific audience, needs and learning goals. We also offer focused, flexible **short courses, self-paced learning options, recorded sessions** and more. We train beginner to advanced skills in all areas we cover, and offer **New Hire / Cohort Training, Boot Camps, Skills Immersion Programs, Reskilling Programs, Skills Migration & Transition Programs**, and more. We collaborate with you to ensure all courses are truly targeted to meet your specific needs and learning skills, maximizing your valuable training time, as well as your important budget.

Please also visit our extensive **Public Training Schedule** for training for smaller groups or individuals. Please contact us for course details, **Corporate Rates** and **Special Discount Offers**.

For more information about our dedicated training services, collaborative mentoring services, courseware licensing options, courseware development services, public course schedule, training management services, partner and reseller programs, or to see our complete list of course offerings and special offers please visit us at www.triveratech.com, email Info@triveratech.com or call us toll free at **844-475-4559**. Our pricing and services are always satisfaction guaranteed.

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